# MAINTENANCE MANAGEMENT ASSISTANCE FOR IMPROVING MONITORING OF LANDSIDE AREA FACILITIES AT I GUSTI NGURAH RAI AIRPORT BALI

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#### **Abstract**

I Gusti Ngurah Rai Airport on the island of Bali, an important gateway for tourism in Indonesia, faces challenges in managing landside facilities to support the growing number of passengers. In this study, we investigate the implementation of maintenance management assistance at I Gusti Ngurah Rai Airport in Bali and its impact on facility inspections in rural areas. The research method collects information through interviews, observation and analysis of relevant documents. The conclusion of this study is that maintenance management assistance is an effective way to overcome ground facility control problems at I Gusti Ngurah Rai Airport in Bali. The significance of this research lies in the importance of continuity of maintenance management assistance to maintain the quality of facilities and provide the best experience for all airport users.

**Keywords**: I Gusti Ngurah Rai Airport, Maintenance Management Assistance, Facility Supervision, Service Quality

# INTRODUCTION

The aerospace industry is an industry that supports aviation by building aircraft and producing spare parts for maintenance (Hapsari, 2019). The aviation industry is very often referred to as an industry that benefits the economies of some countries and regions. I Gusti Ngurah Rai Airport on the island of Bali is one of the main gateways for the millions of tourists who arrive on the island every year (Ambarita, 2020). As a very busy international airport, I Gusti Ngurah Rai Airport plays an important role in supporting the tourism industry and the local economy (Istiyani, 2016). Therefore, the sustainability of operations and the quality of airport facilities are key to providing service users with a positive and satisfying experience (Mahastuti, 2021). Facility management is the process of managing the facility as a whole to prevent waste (Nadhirah, 2021). Manage facilities on airport grounds and toilets on airport grounds.

I Gusti Ngurah Rai Airport Landside Area, which includes entrances, parking lots, public transport facilities and many other support services, is an integral part of this airport system. Which must be recapitulated to help with monthly checks at the facilities unit I Gusti Ngurah

Rai Airport. Ground facilities must be properly designed and maintained to ensure smooth departure and arrival processes as well as provide comfort and security for all airport users (Kurniasih, 2019). The rapid increase in the number of tourists and the development of the tourism industry in Bali also present challenges to the efficient and functional management of rural farms. These problems include, for example, traffic congestion in parking lots, difficulties in monitoring and managing facilities, and the need for routine and preventive maintenance to keep the infrastructure in optimal condition (Karma, 2020). Addressing these challenges is a promising approach to improve the management of I Gusti Ngurah Rai Airport landside area.

Maintenance management assistance includes a wide range of activities aimed at identifying problems, planning maintenance strategies and implementing corrective actions to ensure proper operation and optimal maintenance of the property. With proper maintenance management, it is expected to improve management, improve monitoring and minimize negative impact on airport user experience. In this way, I Gusti Ngurah Rai Airport can continue to maintain its reputation as a reliable and modern airport and offer the best service to all its users. The objectives of the assistance management monitoring implemented are to learn how work and management are carried out at I Gusti Ngurah Rai Airport facilities, to learning as unit member to the support organization overall.

#### IMPLEMENTATION METHOD

Community service activities carried out in the framework of field work practice at I Gusti Ngurah Rai Airport Bali take place from 12 June 2023 to 14 August 2023. The target of implementing this community service activity is the field of facility management at I Gusti Ngurah Rai Airport Bali. The stages of implementing activities include:

# 1. Interviews

Interviews are a qualitative data collection method that involves direct interaction with individuals or groups (Bagaskara, 2023; Gangga, 2023). Researchers conduct structured or semi-structured interviews to gather in-depth information, perspectives and experiences from participants. This method allows researchers to explore complex questions and understand the nuances of participants' thoughts and feelings.

# 2. Observation

Observation is a qualitative data collection method that involves observing and recording behaviors, activities or events in their natural environment (Putri, 2023). Researchers can be passive observers or actively participate in the environment to be studied. Observational data provide a rich and contextual understanding of the research subject and can reveal hidden patterns or behaviors that may not be captured by other methods.

# 3. Analysis of Related Documents

This method involves the study and analysis of existing documents, reports, documents and other relevant materials related to the research topic (Windriani, 2023). These documents may include official reports, historical documents, policies, organizational documents, and other written sources. Analyzing relevant documents helps researchers gain insight into past events, trends and developments related to the research field.

# 4. Maintenance Management Assistance

Maintenance management assistance includes a wide range of activities aimed at identifying problems, planning maintenance strategies and implementing corrective actions to ensure proper operation and optimal maintenance of the property. Ensure regular monitoring of environmental facilities is carried out to identify problems or potential problems early on.

## 5. Evaluation of Activities

The results of this evaluation activities will assist in compiling recommendations for improvements or enhancements in the maintenance and monitoring program for airport environmental facilities. Periodic evaluation is very important to ensure the program remains relevant and effective in maintaining sustainability and environmental sustainability around the airport.

#### RESULTS AND DISCUSSION

Airport is place that we can find so many planes. According to the Minister of Transportation Regulation No. 69 of 2013, an airport is an area on land and/or waters with certain boundaries that can be used as a place for aircraft to land and take off, board passengers, load and unload goods, and place for intra- and inter-modal transportation, which is equipped with with aviation safety and security facilities, as well as basic facilities and other supporting facilities.



Figure 1. Landside Area

Facilities management landside area is the important things that need to be maintenance and monitoring daily work. The landside area is the place where passengers first time seen the facility of the airport, management system that needed to be concern in facilities department is a daily work of the team. Production management maintenance is a job that is carried out sequentially to maintain or repair existing facilities, so that it conforms to the standard (according to functional and quality standards) (Nasution, 2021).

5	+C	D	E	F	G	н
6	No	Lokasi	Uraian	Prioritas	Tanggal	Dokumentasi
7	1	Lounching Pad ▼	Pengecatan kembali rangka baja	Normal +	4 July 2023	
8	2	Pelataran bangunan EMPU ▼	Pembongkaran Taman Di area Pool Taxi	Normal +	4 July 2023	
9	3	Pelataran bangunan EMPU ▼	Pembuatan Garis Parkir Unluk Slot Taxi dan Parkir Moror di area Parkir Empu	Normal +	4 July 2023	<b>5</b> 25

Figure 2. System Management Progress Working of Airport Facilities

Maintenance management assistance activities aimed at increasing monitoring landside facilities at airports have a significant impact in efforts to increasing airport facilities readiness monitoring system to make a significant effort of maintaining maintenance sustainability. Through careful evaluation, the success of the maintenance and monitoring program can be measured in reducing the negative impact on the environment around the airport. The results of the evaluation will provide a clear picture of the landside facility's performance and the effectiveness of the measures that have been implemented. Discussion of the results of this evaluation is an important step in determining the next steps to be taken. Discussions with various stakeholders, such as airport management, authorities, staff involved and local communities, will allow different perspectives to be explored and valuable inputs obtained.

From the results of this discussion, areas that need improvement or adjustment will be identified, so that maintenance and monitoring programs can be improved and contribute better to protecting the environment around the airport. In addition, evaluation and discussion also make it possible to assess compliance with environmental regulations and ensure that the airport operates according to predetermined standards. Thus, the discussion regarding maintenance management assistance activities to improve monitoring of environmental facilities at airports is an important milestone in ensuring the sustainability and success of environmental preservation efforts in the airport environment.

Tanggal	Dokumentasi	Progress	Target	Dokumentasi
7 July 2023		Closed +	7 July 2023	
7 July 2023		Closed →	8 July 2023	
8 July 2023		Closed •	9 July 2023	

Figure 3. Example Progress Maintenance Facilities Landside Area

# **CONCLUSION**

The important role of maintenance and supervision of ground facilities, good maintenance and effective supervision of airport facilities is an important part of maintaining operational performance and reliability. Regular maintenance and timely monitoring ensure that the facility remains in good working order and is safe for passengers and airport users. Benefit from well-coordinated integration of management and maintenance systems. With the help of an integrated system, data collection can be more efficient and accurate, which enables more informed decision-making in property maintenance. It is important to continue to improve the management and control of area accessibility at I Gusti Ngurah Rai Airport. With the right solutions and close cooperation, I Gusti Ngurah Rai Airport can further improve efficiency and service quality for airport users and achieve high safety standards.

### REFERENCES

- Ambarita, R., Negara, I. M. K. & Suwena, I. K. (2020). Analisis Tingkat Kepuasan Wisatawan Domestik Terhadap Pelayanan Customer Service Officer di Bandar Udara Internasional I Gusti Ngurah Rai Bali. *Jurnal IPTA (Industri Perjalanan Wisata)*, 8(2), 255-265.
- Bagaskara, M. C., Putri, P. I. D. & Yasa, P. A. (2023). Pengelolaan Anggaran Operasional Kantor Menggunakan Software SAP. *Jurnal Dikemas (Pengabdian Kepada Masyarakat)*, 7(1), 1-6.
- Gangga, M., Putri. D. A. P. G. & Putri, P. I. D. (2023). Edukasi Manajamen Sampah Berbasis Sumber di Banjar Pohgending, Desa Pitra. Kaibon Abhinaya: Jurnal Pengabdian, 5(2), 121-126.
- Hapsari, V. J. & Nuryakin, C. (2019). Analisis Profil Wisatawan Mancanegara yang Keluar Melalui Pintu Soekarno Hatta dan Ngurah Rai. *Jurnal Kepariwisataan Indonesia*, 12(1), 17-30.
- Istiyani, Y., Pinem, Y. A. & Yuliana, W. (2016). Pelayanan Kepariwisataan oleh Customer Service Officer (CSO) Kepada Customer di PT. Angkasa Pura I Bandar Udara Internasional I Gusti Ngurah Rai Bali. *Jurnal Flight Attendant Kedirgantaraan*, 3(2), 45-50.
- Karma, M. (2020). Sistem Manajemen Pemeliharaan Perkerasan Landasan Di Bandar Udara. Jurnal Perhubungan Udara Warta Ardhia, 46(2), 133-146.
- Kurniasih, R. Rohman, N. & Suprayitno, H. (2019). Kajian Awal Pengelolaan Aset Tetap pada Bandar Udara Internasional I Gusti Ngurah Rai, Bali. *Jurnal Manajemen Aset Infrastruktur & Fasilitas*, 3(2), 27-38.
- Mahastuti, N. M. M., Utami, N. W. A. & Wijaatmaja, A. B. M. (2021). Dampak Perluasan Bandara Internasional I Gusti Ngurah Rai Tahun 2011-2013 Terhadap Kawasan Sekitar. *Prosiding Seminar Nasional dan Arsitektur (SENADA)*, vol. 4, April 2021.
- Nadhirah, G. & Fadjarwati, N. (2021). Analisis Kinerja Aset Fasilitas Sisi Darat Bandara Wiriadinata Berdasarkan Key Performance Indicators of Facility. *Jurnal Manajemen Dirgantara*, 14(1), 95-109.
- Nasution, M., Bakhori, A. & Novarika, W. (2021). Manfaat Perlunya Manajemen Perawatan Untuk Bengkel Maupun Industri. *Buletin Utama Teknik*, 16(3), 248-252.

- Putri, P. I. D., Sudiarta, I. K., Prasetijo, R., & Prasetia, I. N. D. (2023). Indonesia Coral Reef Garden Sanur Bali: Pemulihan Ekonomi Nasional melalui Restorasi Terumbu Karang. *International Journal of Community Service Learning*, 7(2), 168–177.
- Windriani, N. P. W., Putri, P. I. D. & Wiraatmaja, I. P. P. (2023). Pendampingan Pengolahan Data Pribadi Pelanggan Terkait Perlindungan Hukum pada Perumda Air Minum Tirta Sewakadarma Denpasar. *Jurnal Pengabdian Untuk Mu NegeRI*, 7(1), 17-23.